

REMARKS

Claims 1-12 and 38-41 remain in the referenced application. Claims 1 and 38 have been amended, and appended hereto are marked versions of claims 1 and 38 illustrating the revisions made thereto.

Claims 1-12 and 38-41 stand rejected under 35 USC 102(b) as being anticipated by Hlavenka (U.S. Patent No. 5,556,259).

Responsive to the above-recited rejection, Applicant has amended claims 1 and 38, and now presents herewith claims 1-12 and 38-41. Claims 1 and 38 have been amended to recite that the plurality of ports inlet a fluid flow "substantially tangential and normal" to the passageway. Applicant respectfully submits Hlavenka does not disclose such a fluid flow.

Hlavenka discloses an inlet flow traveling through an inlet 65, through a plurality of openings 66, into a cylindrical fluid passage 62, and ultimately to a conical bore 94. As the flow moves through the inlet 65, it is moving along the axis of the fluid passage, and thus not substantially tangential. The openings 66 that inlet fluid to the cylindrical fluid passage 62 are located within the circumference of the cylindrical fluid passage 62. Consequently, the fluid flow entering the cylindrical fluid passage 62 cannot be tangential to the cylindrical passage 62.

Further, the inlet flow into the cylindrical passage 62 cannot be considered substantially normal to the cylindrical passage 62 because it enters through the openings 66 which are parallel to the passage 62. Hlavenka, therefore, does not disclose inlet flow "tangential and normal to the tapered passageway 31" as recited in amended claims 1 and

38. Applicant accordingly respectfully submits claims 1-12 and 38-41 as amended are not anticipated by Hlavenka.

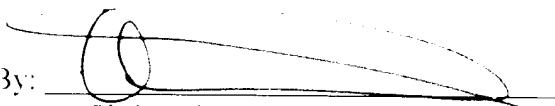
The prior art made of record has been reviewed by Applicant and is deemed not to anticipate nor render obvious the claimed invention.

In view of the foregoing, Applicant respectfully requests reconsideration of the rejected claims and earnestly solicits early allowance of the application.

Respectfully submitted,

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DATE: 8 May 2003

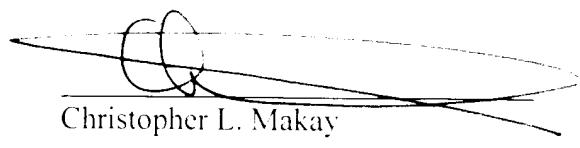
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CERTIFICATE OF MAILING

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AMENDED CLAIMS MARKED TO ILLUSTRATE REVISIONS

1. (amended) A vortex nozzle, comprising:

a nozzle body including a passageway therethrough and a plurality of ports that inlet a fluid flow substantially tangential and normal to [into] the passageway; and  
an end cap attached to the nozzle body.

38. (amended) A vortex nozzle, comprising:

a nozzle body including a passageway;  
at least a segment of the passageway being tapered; and  
a plurality of ports that inlet a fluid flow substantially tangential and normal to [into] the passageway.